UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,960	09/22/2003	Graham Neil McKelvey	CM2631MC	1194

27752 7590 07/18/2005

THE PROCTER & GAMBLE COMPANY
INTELLECTUAL PROPERTY DIVISION
WINTON HILL TECHNICAL CENTER - BOX 161
6110 CENTER HILL AVENUE
CINCINNATI, OH 45224

EXAMINER	
ELHILO, EISA B	

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/667,960	MCKELVEY ET AL.	
	Examiner	Art Unit	
	Eisa B. Elhilo	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/14/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1 A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 14, 2005 has been entered.

NEW GROUND OF REJECTION

Claim Rejections - 35 USC § 103

2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dias et al. (US 6,004,355).

Dias et al. (US' 355) teaches a hair coloring composition comprising an oxidizing agent (see col. 3, line 3), conditioning agents such as silicones (see col. 3, line 29 and col. 31, line 21) and sequestrant (chelant) agents of phosphonic acid derivatives as claimed in claim 1 (see col. 23, line 65 and col. 24, lines 19-23), methyl cellulose as a thickener as claimed in claim 9 (see col. 25, lines 5-6) and oxidative hair dye precursor as claimed in claim 10 (see col. 10, line 50). The composition is an aqueous solution as claimed in claim 8 (see col. 32, Examples I to A), wherein the composition has a pH of 10, which within the claimed range as claimed in claim 1 (see col. 32, line 65). Dias et al. (US' 355) also teaches methods for coloring hair similar to the claimed

method, in that the reference's methods comprise the steps of applying to the hair an oxidative hair coloring composition that comprises hydrogen peroxide component (oxidizing agent), oxidative dye precursors, conditioning agents and sequestrant (chelant) agents of phosphonic acid derivatives as described above, wherein the methods comprise the step of applying to the hair the hydrogen peroxide component prior to application of the admixed contents of the oxidative hair coloring agents and additional materials (see col. 34, line 21-25), and wherein the methods also comprise the step of mixing the oxidative hair coloring agents and oxidizing agent before application to the hair and the mixture is applied to the hair for periods of time depending upon the degree of coloring required as claimed in claims 11-14 (see col. 34, lines 6-7 and lines 30-34). Dias et al. (US' 355) also teaches that the composition cab be applied separately (see col. 34, line 8). Dias et al. (US' 355) further teaches a kit comprising an oxidizing agent and one or more coloring agents as claimed in claim 15 (see col. 22, lines 65-67).

The instant claims differ from the reference by reciting a composition comprising a chelant agent in the amount of greater than 2% to about 5%.

However, Dias et al. (US' 355), teaches a composition comprising a chelant agent in the percentage amounts of 0.05 to 20%, 0.01 to 10% and 0.05 to 2% (see col. 24, lines 7-10).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate such a dyeing composition by optimizing the chelant agent in the composition with the reasonable expectation of success in order to get the maximum effective amount in the hair dyeing composition and would expect such a composition to have similar properties to those claimed, absent unexpected results.

Further, as to the optimization of results, a patent will not granted based upon the optimization of the result effective variables when the optimization is obtained though routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness, see *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F. 2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller,* 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

3 .Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dias et al. (US 6,004,355) in view of Peter et al. (US 3,542,918).

Dias et al. (US' 355) teaches a hair treatment composition in the form of hair coloring composition comprising an oxidizing agent (see col. 3, line 3), conditioning agents such as silicones (see col. 3, line 29 and col. 31, line 21) and sequestrant (chelant) agents of phosphonic acid derivatives such as ethylene diamine tri-(methylene phosphonate) as claimed in claim 1 (see col. 23, line 65 and col. 24, lines 19-23).

The reference does not teach or disclose at least one of the chelants of the formulae (I) to (IV) as claimed in claims 2 and 4. Further, the reference does not teach the chelant species as claimed in claims 3 and 5.

Peter et al. (US' 918) in analogous art of hair treating formulation, teaches a composition comprising chelant compounds (aminopolyphosphoric acid) of a formula (3), which is similar to the claimed formula (III), when in the reference's formula (3), X and Y individually are hydrogen atom or an alkyl group, and R4 and R5 are either a PO_3H_2 group or a group of the formula (4), which is similar to the claimed formula (IIIa) as claimed in claim 2 (see col. 2, formulae 3 and 4), ethylene diamine tetra-(1-ethylphosphoric acid) as claimed in claims 3 and 5

(see col. 2, lines 25-26) and chelant compounds of a formula (5), which is similar to the claimed formula (IV), when in the reference's formula (5), R4 and R5 are a PO_3H_2 group or a group of the formula (6), which is similar to the claimed formula (IVa) as claimed in claim 4 (see col. 2, formulae 5 and 6).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the hair dyeing composition of the primary reference by incorporating the chelant compounds as taught by Peter et al. (US' 918) with a reasonable expectation of success. Such modification would be obvious because the primary reference of Dias et al. (US' 355) suggests the use of aminophosphonates such as diethylene triamine penta (methylene phosphonate) and ethylene diamine tri(methylene phosphonate) as the chelant compounds (see col. 24, lines 11-23). The secondary reference of Peter et al. (US' 918), in analogous art clearly teaches and discloses that aminopolyphosphnic acids and derivatives are used in the hair treating composition for the protection of hair by preventing damage to human hair upon bleaching and/or dyeing (see col. 1, line 56-58), and, thus, a person of the ordinary skill in the art would be motivated to use the aminophosphonate compounds as taught by Peter et al. (US' 918) in the dyeing composition of Dias et al. (US' 355) with a reasonable expectation of success for preventing damage to the hair during bleaching and/or dyeing applications and would expect such a composition to have similar properties to those claimed, absent unexpected results.

4 Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dias et al. (US 6,004,355) in view of Reese et al. (US 4,138,478).

The disclosure of Dias et al. (US' 355), as described above, teaches hair treatment compositions in the form of hair coloring compositions (see col. 31, lines 62-64), wherein the compositions are thickened aqueous compositions (comprising thickeners and water) (see col. 32, Examples I to VI). The reference does not teach a hair treating composition in the form of an oil-in-water emulsion as claimed.

Reese et al. (US' 478) in analogous art of hair treating formulation, teaches a composition which change the color of hair (either by bleaching or by dyeing) (see col. 2, lines 3-5), wherein the composition in the form of fluid baths, dry powder, pastes and cream emulsion of the oil-in-water (see col. 2, lines 9-11 and col. 8, claim 12). Reese et al. (US' 478) also teaches an aqueous composition adapted to change the color of hair, wherein the composition comprises an oxidizing agent and an effective amount of a diphosphonic compound (see col. 7, claim 1).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to formulate the composition of the primary reference in a form of an oil-in-water emulsion as taught by Peese et al. (US' 478). Such modification would be obvious because the primary reference teaches an aqueous hair treating composition (see col. 32, Examples I to VI). The secondary reference of Reese et al. (US' 478) clearly teaches different forms of the hair treating composition such as fluid baths, dry powder, pastes, aqueous and emulsion (see col. 2, lines 9-11 and col. 7, claim 1 and col. 8, claim 12), and, thus, a person of an ordinary skill in the art would be motivated to formulate the treating composition of Dais et al. (US' 355) in any form including the claimed emulsion form, and, would expect such a composition to have similar properties to those claimed, absent unexpected results.

Response to Applicant's Arguments

5 Applicant's arguments filed 6/14/2005 have been fully considered but they are not persuasive.

With respect to the rejections of the claims under 35 U.S,C, 103(a) based on Dais et al. (US' 355) alone or in combination with Berth et al. (US' 918) or Reese et al. (US' 478), Applicant argues that the combination of the references do not teach or disclose all of Applicant's claim limitations as currently amended wherein the chelants are presented in the composition in the amounts of greater than 2% to about 4%.

The examiner respectfully disagrees with the above argument because Dias et al. (US' 355) teaches a composition comprising the sequestrant (chelant) agents of phosphonic acid derivatives and wherein the chelants are presented in the amounts of 0.05 to 10% which covered the claimed range as claimed (see col. 23, line 65 and col. 24, lines 19-23). Therefore, there is a sufficient motivation to one having ordinary skill in the art at the time the invention was make to formulate such a composition by optimizing the amount of the chelant agent in the composition in order to get the maximum effective amounts of these dyeing ingredients. Therefore, the rejection under 103(a) is proper and the prima facie case of obviousness has been established.

Conclusion

6 The references listed on from 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eisa B Elhilo whose telephone number is (571) 272-1315. The

examiner can normally be reached on M - F (8:00 -5:30) with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eisa Elhilo
Patent Examiner
Art Unit 1751

July 8, 2005